

### AMENDMENTS TO THE CLAIMS

#### Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) An implant ~~suitable for a condyle of a femur having a superior~~ implantation on a femoral condyle, comprising a bone-facing implant surface and an ~~inferior~~ joint-facing implant surface; wherein the ~~superior bone-facing implant~~ surface opposes at least a portion of the femoral condyle of the femur and the trochlea, and the ~~inferior~~ joint-facing implant surface opposes at least a ~~portion of a weight bearing~~ portion of a tibial surface and a patella; and further wherein at least ~~one~~ a portion of the ~~superior or inferior surfaces~~ bone-facing implant surface has a three-dimensional shape that substantially matches the shape of ~~one of the femur and tibia surfaces~~ at least a portion of an uncut articular surface that the bone-facing surface of the implant abuts.
2. (Canceled)
3. (Original) The implant of claim 1 wherein the implant has a thickness of a cartilage defect in a patient.
4. (Original) The implant of claim 1 wherein the implant has a thickness of 85% of a cartilage defect in a patient.
5. (Original) The implant of claim 1 wherein the implant has a thickness of between 65%-100% of a cartilage defect of a patient.
6. (Original) The implant of claim 1 wherein the implant has a thickness of a cartilage defect plus a predefined offset value.

7. (Original) The implant of claim 6, wherein said offset value can be selected to adjust for axis malalignment.
8. (Original) The implant of claim 1 wherein the implant is constructed of a material comprising metal or metal alloy.
9. (Original) The implant of claim 1 wherein the material comprises one or more biologically active materials.
10. (Original) The implant of claim 6 wherein the implant is coated with a biologically active material.
11. (Original) The implant of claim 1 wherein the implant is comprised of a metal or metal alloy and a polymer.
12. (Currently amended) The implant of claim 1 further having a structure for attachment on at least one of the ~~superior~~bone-facing surface and the ~~inferior~~joint-facing surface selected from the group consisting of: ridges, pegs, pins, cross-members, teeth and protrusions.
13. (Original) The implant of claim 12 further having a plurality of structures for attachment.
14. (Original) The implant of claim 13 wherein the relative orientation of the structures for attachment are selected from the group consisting of: symmetrical, asymmetrical, rows, circles, triangles, and random.
15. (Currently Amended) The implant of claim 1 wherein a second component of the implant covers a portion of a patellar surface ~~of the femur~~.
16. (Currently amended) The implant of claim 1 wherein each of the ~~superior~~bone-facing surface and ~~inferior surface~~joint-facing surfaces have a

slope relative to a longitudinal axis through at least a portion of the implant and further wherein the slope of the ~~superior~~bone-facing surface relative to the slope of the ~~inferior~~joint-facing surface is selected from the group consisting of: positive, negative, and null.

17. (Currently Amended) The implant of claim 1 wherein the external surface of the implant approximates the shape of one of the ~~first and second~~ condylar, trochlear, tibial or patellar articular surfaces.
18. (Currently Amended) The implant of claim 1 wherein a condyle mating surface of the implant has at least one plane surface for mating with a prepared condyle having a ~~chamfer~~ cut.
19. (Original) The implant of claim 1 wherein the implant is selected from a library of implants.
20. (Original) The implant of claim 1 wherein the implant is surgically implanted via an incision of 10 cm or less.
21. (Original) The implant of claim 1 wherein the implant is surgically implanted via an incision of 6 cm or less.
22. (Original) The implant of claim 1 wherein the range of motion of the joint is restored to between 80-99.9% of normal joint motion.
23. (Original) The implant of claim 1 wherein the range of motion of the joint is restored to between 90-99.9% of normal joint motion.
24. (Original) The implant of claim 1 wherein the range of motion of the joint is restored to between 95-99.9% of normal joint motion.

25. (Original) The implant of claim 1 wherein the range of motion of the joint is restored to between 98-99.9% of normal joint motion.
26. (Original) The implant of claim 1 wherein the implant is formed to oppose at least a portion of a second condyle on the femur.
27. (Currently amended) A kit for repairing a knee comprising ~~one or more implants selected from the following: a condylar implant having a superior surface and an inferior surface wherein the superior surface opposes at least a portion of a condyle of the femur and a trochlea and the inferior surface opposes at least a portion of a weight bearing portion of a tibial surface and a patella and further wherein at least one of the superior or inferior surfaces has a three dimensional shape that substantially matches the shape of one of the femur and tibia surfaces; a condylar implant having a superior surface and an inferior surface wherein the superior surface opposes at least a portion of a condyle of the femur and the inferior surface opposes at least a portion of a weight bearing portion of a tibial surface and further wherein at least one of the superior or inferior surfaces has a three dimensional shape that substantially matches the shape of one of the femur and tibia surfaces; a patellar implant having a first surface that engages the femur mating surface of the patella and a second surface that engages the trochlea; and an implant suitable for the tibial plateau having a superior surface and an inferior surface wherein the superior surface opposes at least a portion of a femur and the inferior portion opposes at least a portion of the tibial surface and further wherein at least one of the superior or inferior surfaces has a three dimensional shape that substantially matches the shape of one of the femur and tibial surfaces.~~

- a. a femoral condyle implant comprising a bone-facing femoral implant surface and a joint-facing femoral implant surface; wherein the bone-facing femoral implant surface opposes at least a portion of the femoral condyle and the trochlea, and the joint-facing femoral implant surface opposes at least a portion of a tibial surface and a patella; and further wherein at least a portion of the bone-facing implant surface has a three-dimensional shape that substantially matches the shape of at least a portion of an uncut articular surface that the bone-facing surface of the implant abuts;;
- b. a patellar implant comprising a first surface that engages the femur mating surface of the patella and a second surface that engages the patella.

28. (New) An implant for implantation on a femoral condyle, comprising a bone-facing implant surface and a joint-facing implant surface; wherein the bone-facing implant surface opposes at least a portion of at least one or more femoral condyles and the trochlea; and the joint-facing implant surface opposes at least a portion of a weight-bearing portion of a tibial surface and a patella; and further wherein at least a portion of the bone-facing implant surface has a three dimensional shape that substantially matches the shape of an uncut articular surface that the implant abuts.

29. (New) The implant of claim 28, wherein at least a portion of the joint-facing surface of the implant has a three-dimensional shape that substantially matches the surface of an opposing tibial implant component.

30. (New) The implant of claim 28, wherein at least a portion of the joint facing surface of the implant has a three-dimensional shape that substantially

matches the shape of at least one of the articular surface that the bone-facing surface of the implant abuts and the joint-facing surface of the implant abuts.

31. (New) An implant for implantation on a femoral condyle, comprising a bone-facing implant surface and an joint-facing implant surface; wherein the bone-facing implant surface opposes at least a portion of the femoral condyle and the trochlea, and the joint-facing implant surface opposes at least a portion of a tibial surface and a patella; and further wherein at least a portion of the joint-facing implant surface has a three-dimensional shape that substantially matches the shape of at least a portion of the uncut articular surface that the bone-facing surface of the implant abuts.
32. (New) The implant of claim 32, wherein the implant has a thickness of a cartilage defect plus a predefined offset value.
33. (New) The implant of claim 33, wherein said offset value can be selected to adjust for axis malalignment.
34. (New) The implant of claim 32, wherein the implant is constructed of a material comprising metal or metal alloy.
35. (New) The implant of claim 32, further having a structure for attachment on at least one of the bone-facing surface and the joint-facing surface selected from the group consisting of: ridges, pegs, pins, cross-members, teeth and protrusions.
36. (New) The implant of claim 33, wherein the implant has a thickness similar to normal cartilage.
37. (New) The implant of claim 33, wherein the implant has a thickness that is constant across the implant.

38. (New) The implant of claim 33, wherein the implant has a thickness that varies across the implant.
39. (New) An implant for implantation on a femoral condyle, comprising a bone-facing implant surface and an joint-facing implant surface; wherein the bone-facing implant surface opposes at least a portion of the femoral condyle and the trochlea, and the joint-facing implant surface opposes at least a portion of a tibial surface and a patella; and further wherein at least a portion of both the bone-facing and the joint-facing implant surface has a three-dimensional shape that substantially matches the shape of at least a portion of the uncut articular surface that the bone-facing surface of the implant abuts.
40. (New) The implant of claim 1, wherein at least a portion of both the bone-facing and the joint-facing implant surface has a three-dimensional shape that substantially matches the shape of at least a portion of an uncut articular surface that the bone-facing surface of the implant abuts.
41. (New) The implant of claim 1, wherein at least a portion of the joint-facing implant surface has a three-dimensional shape that substantially matches the shape of at least a portion of an uncut articular surface that the bone-facing surface of the implant abuts.
42. (New) The implant of claim 1, wherein at least a portion of the joint facing implant surface has a three-dimensional shape that substantially mimicks the shape of a normal articular cartilage surface.
43. (New) The implant of claim 1, wherein the distance between the bone facing and the joint facing implant surface is constant.

44. (New) The implant of claim 43, wherein said distance between the bone facing and the joint facing implant surface is similar to the thickness of articular cartilage.
45. (New) The implant of claim 1, wherein the distance between the bone facing and the joint facing implant surface is variable.
46. (New) The implant of claim 45, wherein the distance between the bone facing and the joint facing implant surface is similar to the thickness of articular cartilage.